FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO
Solar Turbines Incorporated

AUTHORIZING THE OPERATION OF
Dallas Overhaul Center
Turbine and Turbine Generator Set Unit Manufacturing

LOCATED AT
Dallas County, Texas
Latitude 32° 37′ 39″ Longitude 96° 51′ 1″
Regulated Entity Number: RN100219963

This permit is issued in accordance with and subject to the Texas Clean Air Act (TCAA), Chapter 382 of the Texas Health and Safety Code and Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122), Federal Operating Permits. Under 30 TAC Chapter 122, this permit constitutes the permit holder's authority to operate the site and emission units listed in this permit. Operations of the site and emission units listed in this permit are subject to all additional rules or amended rules and orders of the Commission pursuant to the TCAA.

This permit does not relieve the permit holder from the responsibility of obtaining New Source Review authorization for new, modified, or existing facilities in accordance with 30 TAC Chapter 116, Control of Air Pollution by Permits for New Construction or Modification.

The site and emission units authorized by this permit shall be operated in accordance with 30 TAC Chapter 122, the general terms and conditions, special terms and conditions, and attachments contained herein.

This permit shall expire five years from the date of issuance. The renewal requirements specified in 30 TAC § 122.241 must be satisfied in order to renew the authorization to operate the site and emission units.

Permit No: O1333 Issuance Date: December 8, 2021

For the Commission

Table of Contents

General Terms and Conditions

The permit holder shall comply with all terms and conditions contained in 30 TAC § 122.143 (General Terms and Conditions), 30 TAC § 122.144 (Recordkeeping Terms and Conditions), 30 TAC § 122.145 (Reporting Terms and Conditions), and 30 TAC § 122.146 (Compliance Certification Terms and Conditions).

In accordance with 30 TAC § 122.144(1), records of required monitoring data and support information required by this permit, or any applicable requirement codified in this permit, are required to be maintained for a period of five years from the date of the monitoring report, sample, or application unless a longer data retention period is specified in an applicable requirement. The five year record retention period supersedes any less stringent retention requirement that may be specified in a condition of a permit identified in the New Source Review Authorization attachment.

If the permit holder chooses to demonstrate that this permit is no longer required, a written request to void this permit shall be submitted to the Texas Commission on Environmental Quality (TCEQ) by the Responsible Official in accordance with 30 TAC § 122.161(e). The permit holder shall comply with the permit's requirements, including compliance certification and deviation reporting, until notified by the TCEQ that this permit is voided.

The permit holder shall comply with 30 TAC Chapter 116 by obtaining a New Source Review authorization prior to new construction or modification of emission units located in the area covered by this permit.

All reports required by this permit must include in the submittal a cover letter which identifies the following information: company name, TCEQ regulated entity number, air account number (if assigned), site name, area name (if applicable), and Air Permits Division permit number(s).

Special Terms and Conditions:

Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting

1. Permit holder shall comply with the following requirements:

    A. Emission units (including groups and processes) in the Applicable Requirements Summary attachment shall meet the limitations, standards, equipment specifications, monitoring, recordkeeping, reporting, testing, and other requirements listed in the Applicable Requirements Summary attachment to assure compliance with the permit.

    B. The textual description in the column titled "Textual Description" in the Applicable Requirements Summary attachment is not enforceable and is not deemed as a substitute for the actual regulatory language. The Textual Description is provided for information purposes only.

    C. A citation listed on the Applicable Requirements Summary attachment, which has a notation [G] listed before it, shall include the referenced section and subsection for all commission rules, or paragraphs for all federal and state regulations and all subordinate paragraphs, subparagraphs and clauses, subclauses, and items contained within the referenced citation as applicable requirements.

    D. When a grouped citation, notated with a [G] in the Applicable Requirements Summary, contains multiple compliance options, the permit holder must keep records of when each compliance option was used.

E. Emission units subject to 40 CFR Part 63, Subpart ZZZZ as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter 113, Subchapter C, § 113.1090 which incorporates the 40 CFR Part 63 Subpart by reference.

F. For the purpose of generating emission reduction credits through 30 TAC Chapter 101, Subchapter H, Division 1 (Emission Credit Banking and Trading), the permit holder shall comply with the following requirements:

(i) Title 30 TAC § 101.302 (relating to General Provisions)

(ii) Title 30 TAC § 101.303 (relating to Emission Reduction Credit Generation Certification)

(iii) Title 30 TAC § 101.304 (relating to Mobile Emission Reduction Credit Generation and Certification)

(iv) Title 30 TAC § 101.309 (relating to Emission Credit Banking and Trading)

(v) The terms and conditions by which the emission limits are established to generate the reduction credit are applicable requirements of this permit

G. For the purpose of generating discrete emission reduction credits through 30 TAC Chapter 101, Subchapter H, Division 4 (Discrete Emission Credit Banking and Trading), the permit holder shall comply with the following requirements:

(i) Title 30 TAC § 101.372 (relating to General Provisions)

(ii) Title 30 TAC § 101.373 (relating to Discrete Emission Reduction Credit Generation and Certification)

(iii) Title 30 TAC § 101.374 (relating to Mobile Discrete Emission Reduction Credit Generation and Certification)

(iv) Title 30 TAC § 101.378 (relating to Discrete Emission Credit Banking and Trading)

(v) The terms and conditions by which the emission limits are established to generate the discrete reduction credit are applicable requirements of this permit

2. The permit holder shall comply with the following sections of 30 TAC Chapter 101 (General Air Quality Rules):

A. Title 30 TAC § 101.1 (relating to Definitions), insofar as the terms defined in this section are used to define the terms used in other applicable requirements

B. Title 30 TAC § 101.3 (relating to Circumvention)

C. Title 30 TAC § 101.8 (relating to Sampling), if such action has been requested by the TCEQ

D. Title 30 TAC § 101.9 (relating to Sampling Ports), if such action has been requested by the TCEQ

E. Title 30 TAC § 101.10 (relating to Emissions Inventory Requirements)

F. Title 30 TAC § 101.201 (relating to Emission Event Reporting and Recordkeeping Requirements)

G. Title 30 TAC § 101.211 (relating to Scheduled Maintenance, Start-up, and Shutdown Reporting and Recordkeeping Requirements)

H. Title 30 TAC § 101.221 (relating to Operational Requirements)

I. Title 30 TAC § 101.222 (relating to Demonstrations)

J. Title 30 TAC § 101.223 (relating to Actions to Reduce Excessive Emissions)

3. Permit holder shall comply with the following requirements of 30 TAC Chapter 111:

A. Visible emissions from stationary vents with a flow rate of less than 100,000 actual cubic feet per minute and constructed after January 31, 1972 that are not listed in the Applicable Requirements Summary attachment for 30 TAC Chapter 111, Subchapter A, Division 1, shall not exceed 20% opacity averaged over a six-minute period. The permit holder shall comply with the following requirements for stationary vents at the site subject to this standard:

(i) Title 30 TAC § 111.111(a)(1)(B) (relating to Requirements for Specified Sources)

(ii) Title 30 TAC § 111.111(a)(1)(E)

(iii) Title 30 TAC § 111.111(a)(1)(F)(i), (ii), (iii), or (iv)

(iv) For emission units with vent emissions subject to 30 TAC § 111.111(a)(1)(B), complying with 30 TAC § 111.111(a)(1)(F)(ii), (iii), or (iv), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146. These periodic monitoring requirements do not apply to vents that are not capable of producing visible emissions such as vents that emit only colorless VOCs; vents from non-fuming liquids; vents that provide passive ventilation, such as plumbing vents; or vent emissions from any other source that does not obstruct the transmission of light. Vents, as specified in the "Applicable Requirements Summary" attachment, that are subject to the emission limitation of 30 TAC § 111.111(a)(1)(B) are not subject to the following periodic monitoring requirements:

(1) An observation of stationary vents from emission units in operation shall be conducted at least once during each calendar quarter unless the emission unit is not operating for the entire quarter.

(2) For stationary vents from a combustion source, if an alternative to the normally fired fuel is fired for a period greater than or equal to 24 consecutive hours, the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are present. If such period is greater than 3 months, observations shall be conducted once during each quarter. Supplementing the normally fired fuel with natural gas or fuel gas to increase the net heating value to the minimum required value does not constitute creation of an alternative fuel.

(3) Records of all observations shall be maintained.

(4) Visible emissions observations of emission units operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of emission units operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions observations shall be made during times when the activities described in 30 TAC § 111.111(a)(1)(E) are not taking place. Visible emissions shall be determined with each stationary vent in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each stationary vent during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

(5) Compliance Certification:

(a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(1) and (a)(1)(B).

(b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(1)(F) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

(c) Some vents may be subject to multiple visible emission or monitoring requirements. All credible data must be considered when certifying compliance with this requirement even if the observation or monitoring was performed to demonstrate compliance with a different requirement.

B. For visible emissions from a building, enclosed facility, or other structure; the permit holder shall comply with the following requirements:

(i) Title 30 TAC § 111.111(a)(7)(A) (relating to Requirements for Specified Sources)

(ii) Title 30 TAC § 111.111(a)(7)(B)(i) or (ii)

(iii) For a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source subject to 30 TAC § 111.111(a)(7)(A), complying with 30 TAC § 111.111(a)(7)(B)(i) or (ii), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:

(1) An observation of visible emissions from a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source which is required to comply with 30 TAC § 111.111(a)(7)(A) shall be conducted at least once during each calendar quarter unless the air emission source or enclosed facility is not operating for the entire quarter.

(2) Records of all observations shall be maintained.

(3) Visible emissions observations of air emission sources or enclosed facilities operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of air emission sources or enclosed facilities operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions shall be determined with each emissions outlet in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each emissions outlet during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

(4) Compliance Certification:

(a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(7) and (a)(7)(A).

(b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(7)(B) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of

compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

C. For visible emissions from all other sources not specified in 30 TAC § 111.111(a)(1), (4), or (7); the permit holder shall comply with the following requirements:

(i) Title 30 TAC § 111.111(a)(8)(A) (relating to Requirements for Specified Sources)

(ii) Title 30 TAC § 111.111(a)(8)(B)(i) or (ii)

(iii) For a source subject to 30 TAC § 111.111(a)(8)(A), complying with 30 TAC § 111.111(a)(8)(B)(i) or (ii), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:

(1) An observation of visible emissions from a source which is required to comply with 30 TAC § 111.111(a)(8)(A) shall be conducted at least once during each calendar quarter unless the source is not operating for the entire quarter.

(2) Records of all observations shall be maintained.

(3) Visible emissions observations of sources operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of sources operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions shall be determined with each source in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each source during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. For INPLANTBLST and INPLANTPAINT, the determination of visible emissions shall be made at the nearest property line downwind of the source or within 500 feet of the source, whichever is closer to the source. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

(4) Compliance Certification:

(a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(8) and (a)(8)(A)

(b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under

30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(8)(B) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

D. Certification of opacity readers determining opacities under Method 9 (as outlined in 40 CFR Part 60, Appendix A) to comply with opacity monitoring requirements shall be accomplished by completing the Visible Emissions Evaluators Course, or approved agency equivalent, no more than 180 days before the opacity reading.

E. For emission units with contributions from uncombined water, the permit holder shall comply with the requirements of 30 TAC § 111.111(b).

F. Emission limits on nonagricultural processes, except for the steam generators specified in 30 TAC § 111.153, shall comply with the following requirements:

(i) Emissions of PM from any source may not exceed the allowable rates as required in 30 TAC § 111.151(a) (relating to Allowable Emissions Limits)

(ii) Sources with an effective stack height (h_e) less than the standard effective stack height (H_e), must reduce the allowable emission level by multiplying it by $[h_e/H_e]^2$ as required in 30 TAC § 111.151(b)

(iii) Effective stack height shall be calculated by the equation specified in 30 TAC § 111.151(c)

4. The permit holder shall comply with the following 30 TAC Chapter 115, Subchapter F requirements (relating to Cutback Asphalt Requirements):

A. Title 30 TAC § 115.512(2) (relating to Control Requirements)

5. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 60, unless otherwise stated in the applicable subpart:

A. Title 40 CFR § 60.7 (relating to Notification and Recordkeeping)

B. Title 40 CFR § 60.8 (relating to Performance Tests)

C. Title 40 CFR § 60.11 (relating to Compliance with Standards and Maintenance Requirements)

D. Title 40 CFR § 60.12 (relating to Circumvention)

E. Title 40 CFR § 60.13 (relating to Monitoring Requirements)

F. Title 40 CFR § 60.14 (relating to Modification)

G. Title 40 CFR § 60.15 (relating to Reconstruction)

H. Title 40 CFR § 60.19 (relating to General Notification and Reporting Requirements)

6. The permit holder shall comply with the requirements of 30 TAC Chapter 113, Subchapter C, § 113.100 for units subject to any subpart of 40 CFR Part 63, unless otherwise stated in the applicable subpart.

Additional Monitoring Requirements

7. The permit holder shall comply with the periodic monitoring requirements as specified in the attached "Periodic Monitoring Summary" upon issuance of the permit. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permit holder shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. The permit holder may elect to collect monitoring data on a more frequent basis and average the data, consistent with the averaging time or minimum frequency specified in the "Periodic Monitoring Summary," for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis. In no event shall data be collected and used in particular instances to avoid reporting deviations. Deviations shall be reported according to 30 TAC § 122.145 (Reporting Terms and Conditions).

New Source Review Authorization Requirements

8. Permit holder shall comply with the requirements of New Source Review authorizations issued or claimed by the permit holder for the permitted area, including permits, permits by rule (including the terms, conditions, monitoring, recordkeeping, and reporting identified in registered PBRs and permits by rule identified in the PBR Supplemental Tables dated December 04, 2020 in the application for project 36429), standard permits, flexible permits, special permits, permits for existing facilities including Voluntary Emissions Reduction Permits and Electric Generating Facility Permits issued under 30 TAC Chapter 116, Subchapter I, or special exemptions referenced in the New Source Review Authorization References attachment. These requirements:

A. Are incorporated by reference into this permit as applicable requirements

B. Shall be located with this operating permit

C. Are not eligible for a permit shield

9. The permit holder shall comply with the general requirements of 30 TAC Chapter 106, Subchapter A or the general requirements, if any, in effect at the time of the claim of any PBR.

10. The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time period that are representative of the emission unit's compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity and throughput, hours of operation, safety data sheets (SDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144. Any monitoring or recordkeeping data indicating

noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).

Compliance Requirements

11. The permit holder shall certify compliance in accordance with 30 TAC § 122.146. The permit holder shall comply with 30 TAC § 122.146 using at a minimum, but not limited to, the continuous or intermittent compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and any other credible evidence or information. The certification period may not exceed 12 months and the certification must be submitted within 30 days after the end of the period being certified.

12. Permit holder shall comply with the following 30 TAC Chapter 117 requirements:

    A. The permit holder shall comply with the compliance schedules and submit written notification to the TCEQ Executive Director as required in 30 TAC Chapter 117, Subchapter H, Division 1:

        (i) For sources in the Dallas-Fort Worth Eight-Hour Nonattainment area, 30 TAC § 117.9030

    B. The permit holder shall comply with the Initial Control Plan unit identification requirements in 30 TAC § 117.450(a) and (a)(1)-(7).

    C. The permit holder shall comply with the requirements of 30 TAC § 117.454 for Final Control Plan Procedures for Attainment Demonstration Emission Specifications and 30 TAC § 117.456 for Revision of Final Control Plan.

    D. The permit holder shall comply with the requirement in 30 TAC § 117.450(b) for identification of exempt units in the Initial Control Plan.

13. Use of Emission Credits to comply with applicable requirements:

    A. Unless otherwise prohibited, the permit holder may use emission credits to comply with the following applicable requirements listed elsewhere in this permit:

        (i) Title 30 TAC Chapter 115

        (ii) Title 30 TAC Chapter 117

        (iii) Offsets for Title 30 TAC Chapter 116

    B. The permit holder shall comply with the following requirements in order to use the emission credits to comply with the applicable requirements:

        (i) The permit holder must notify the TCEQ according to 30 TAC § 101.306(c)-(d)

        (ii) The emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 1

        (iii) The executive director has approved the use of the credit according to 30 TAC § 101.306(c)-(d)

(iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.302(g) and 30 TAC Chapter 122

(v) Title 30 TAC § 101.305 (relating to Emission Reductions Achieved Outside the United States)

14. Use of Discrete Emission Credits to comply with the applicable requirements:

A. Unless otherwise prohibited, the permit holder may use discrete emission credits to comply with the following applicable requirements listed elsewhere in this permit:

(i) Title 30 TAC Chapter 115

(ii) Title 30 TAC Chapter 117

(iii) If applicable, offsets for Title 30 TAC Chapter 116

(iv) Temporarily exceed state NSR permit allowables

B. The permit holder shall comply with the following requirements in order to use the credit to comply with the applicable requirements:

(i) The permit holder must notify the TCEQ according to 30 TAC § 101.376(d)

(ii) The discrete emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 4

(iii) The executive director has approved the use of the discrete emission credits according to 30 TAC § 101.376(d)(1)(A)

(iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.372(h) and 30 TAC Chapter 122

(v) Title 30 TAC § 101.375 (relating to Emission Reductions Achieved Outside the United States)

Risk Management Plan

15. For processes subject to 40 CFR Part 68 and specified in 40 CFR § 68.10, the permit holder shall comply with the requirements of the Accidental Release Prevention Provisions in 40 CFR Part 68. The permit holder shall submit to the appropriate agency either a compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR § 68.10(a), or as part of the compliance certification submitted under this permit, a certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of a risk management plan.

Protection of Stratospheric Ozone

16. Permit holders at a site subject to Title VI of the FCAA Amendments shall meet the following requirements for protection of stratospheric ozone:

A. Any on site servicing, maintenance, and repair on refrigeration and nonmotor vehicle air-conditioning appliances using ozone-depleting refrigerants or non-exempt substitutes shall be conducted in accordance with 40 CFR Part 82, Subpart F. Permit holders shall ensure that repairs on or refrigerant removal from refrigeration and nonmotor vehicle air-conditioning appliances using ozone-depleting refrigerants are performed only by properly certified technicians using certified equipment. Records shall be maintained as required by 40 CFR Part 82, Subpart F.

B. The permit holder shall comply with 40 CFR Part 82, Subpart F related to the disposal requirements for appliances using Class I or Class II (ozone-depleting) substances or non-exempt substitutes as specified in 40 CFR §§ 82.150 - 82.166 and the applicable Part 82 Appendices.

C. The permit holder shall comply with 40 CFR Part 82, Subpart H related to Halon Emissions Reduction requirements as specified in 40 CFR § 82.250 - § 82.270 and the applicable Part 82 Appendices.

Permit Location

17. The permit holder shall maintain a copy of this permit and records related to requirements listed in this permit on site.

Attachments

Applicable Requirements Summary

Additional Monitoring Requirements

New Source Review Authorization References

Applicable Requirements Summary

Note: A “none” entry may be noted for some emission sources in this permit’s “Applicable Requirements Summary” under the heading of “Monitoring and Testing Requirements” and/or “Recordkeeping Requirements” and/or “Reporting Requirements.” Such a notation indicates that there are no requirements for the indicated emission source as identified under the respective column heading(s) for the stated portion of the regulation when the emission source is operating under the conditions of the specified SOP Index Number. However, other relevant requirements pursuant to 30 TAC Chapter 122 including Recordkeeping Terms and Conditions (30 TAC § 122.144), Reporting Terms and Conditions (30 TAC § 122.145), and Compliance Certification Terms and Conditions (30 TAC § 122.146) continue to apply.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
DIESEL UNL	LOADING/UNLOADING OPERATIONS	N/A	R5212-DIESEL	30 TAC Chapter 115, Loading and Unloading of VOC	No changing attributes.
EC1	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5121-EXEMPT	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
EG2	SRIC ENGINES	N/A	117B-1	30 TAC Chapter 117, Subchapter B	No changing attributes.
EG2	SRIC ENGINES	N/A	60JJJJ-EG	40 CFR Part 60, Subpart JJJJ	No changing attributes.
EG2	SRIC ENGINES	N/A	63ZZZZ-EG	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
GRPDFT	STORAGE TANKS/VESSELS	DFT1, DFT2	R5112-DIESEL	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
GRPOWS	VOLATILE ORGANIC COMPOUND WATER SEPARATORS	S1, S2, S3	R5131	30 TAC Chapter 115, Water Separation	No changing attributes.
GRPPRE-FLR	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	PRE-HFF1, PRE-TC6F, PRE-TC7F	R5121-FLARES	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
GRPTC	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	TC1, TC4, TC5, TC6, TC7	R1111HIFLO	30 TAC Chapter 111, Visible Emissions	No changing attributes.
PC3	SOLVENT DEGREASING MACHINES	N/A	R5412	30 TAC Chapter 115, Degreasing Processes	No changing attributes.
PROPSB1	SURFACE COATING OPERATIONS	N/A	R5450EXEMPT	30 TAC Chapter 115, Subchapter E, Division 5	Application System = The surface coating or surface coating process used is specified in §115.451(f)(1)-(7).

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
PROPSB1	SURFACE COATING OPERATIONS	N/A	R5450NORMAL	30 TAC Chapter 115, Subchapter E, Division 5	Application System = The surface coating or surface coating process is not specified in §155.451(f)(1)-(7).

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
DIESEL UNL	EU	R5212-DIESEL	VOC	30 TAC Chapter 115, Loading and Unloading of VOC	§ 115.217(a)(1) § 115.212(a)(2) § 115.214(a)(1)(B) § 115.214(a)(1)(D) § 115.214(a)(1)(D)(i)	Vapor pressure (at land-based operations). All land-based loading and unloading of VOC with a true vapor pressure less than 0.5 psia is exempt from the requirements of this division, except as specified.	§ 115.214(a)(1)(A) § 115.214(a)(1)(A)(i) § 115.215 § 115.215(4)	§ 115.216 § 115.216(2) § 115.216(3)(B)	None
EC1	EP	R5121-EXEMPT	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(a)(2)(A) [G]§ 115.122(a)(4) § 115.127(a)(2)	A vent gas stream having a combined weight of volatile organic compounds (VOC) equal to or less than 100 pounds in any continuous 24-hour period is exempt from §115.121(a)(1) of this title.	[G]§ 115.125 § 115.126(2)	§ 115.126 § 115.126(2) § 115.126(4)	None
EG2	EU	117B-1	Exempt	30 TAC Chapter 117, Subchapter B	§ 117.403(a)(7)(D) § 117.403(a)	Units exempt from this division, except as specified in §§ 117.440(i), 117.445(f)(4) and (9), 117.450 and 117.454, include stationary gas turbines and stationary internal combustion engines used exclusively in emergency situations, except that operation for testing or maintenance is allowed for up to 100 hours per year, based on a rolling 12-month average. New, modified, reconstructed or relocated stationary diesel engine placed into service on or after June 1, 2007, are ineligible.	§ 117.8140(a) § 117.8140(a)(3)	§ 117.440(i) § 117.445(f) § 117.445(f)(4)	None
EG2	EU	60JJJJ-EG	CO	40 CFR Part 60,	§ 60.4233(d)-Table	Owners and operators of	§ 60.4237(c)	§ 60.4243(a)(1)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
				Subpart JJJJ	1 § 60.4234 § 60.4243(b) § 60.4243(b)(1) [G]§ 60.4243(d) § 60.4246	stationary emergency SI ICE with a maximum engine power greater than 25 HP and less than 100 HP and were manufactured on or after 01/01/2009 must comply with a CO emission limit of 387 g/HP-hr, as listed in Table 1 to this subpart.		§ 60.4245(a) § 60.4245(a)(2) § 60.4245(a)(3) § 60.4245(b)	
EG2	EU	60JJJJ-EG	HC and NO_X	40 CFR Part 60, Subpart JJJJ	§ 60.4233(d)-Table 1 § 60.4234 § 60.4243(b) § 60.4243(b)(1) [G]§ 60.4243(d) § 60.4246	Owners and operators of stationary emergency SI ICE with a maximum engine power greater than 25 HP and less than 100 HP and were manufactured on or after 01/01/2009 must comply with an HC+NOx emission limit of 10 g/HP-hr, as listed in Table 1 to this subpart.	§ 60.4237(c)	§ 60.4243(a)(1) § 60.4245(a) § 60.4245(a)(2) § 60.4245(a)(3) § 60.4245(b)	None
EG2	EU	63ZZZZ-EG	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(c)	Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines as applicable. No further requirements apply for such engines under this part.	None	None	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
GRPDFT	EU	R5112-DIESEL	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None
GRPOWS	EU	R5131	VOC	30 TAC Chapter 115, Water Separation	§ 115.137(a)(2) [G]§ 115.132(a)(4)	Any single or multiple compartment VOC water separator which separates materials having a true vapor pressure of VOC < .5 psia obtained from any equipment is exempt from §115.132(a).	[G]§ 115.135(a) § 115.136(a)(1) § 115.136(a)(3) § 115.136(a)(4)	§ 115.136(a)(1) § 115.136(a)(3) § 115.136(a)(4)	None
GRPPRE-FLR	EP	R5121-FLARES	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(a)(2)(A) [G]§ 115.122(a)(4) § 115.127(a)(2)	A vent gas stream having a combined weight of volatile organic compounds (VOC) equal to or less than 100 pounds in any continuous 24-hour period is exempt from §115.121(a)(1) of this title.	[G]§ 115.125 § 115.126(2)	§ 115.126 § 115.126(2) § 115.126(4)	None
GRPTC	EP	R1111HIFLO	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 15% averaged over a six minute period for any source with a total flow rate of at least 100,000 acfm unless a CEMS is installed.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None
PC3	EU	R5412	VOC	30 TAC Chapter 115, Degreasing Processes	§ 115.412(1) § 115.411(1) § 115.411(2) [G]§ 115.412(1)(A) § 115.412(1)(C) § 115.412(1)(D)	No person shall own or operate a system utilizing a VOC for the cold solvent cleaning of objects without the controls listed in §115.412(1)(A)-(F), except	[G]§ 115.415(1) § 115.415(3) ** See Periodic Monitoring Summary	§ 115.416 § 115.416(4) § 115.416(4)(A) § 115.416(4)(B)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					[G]§ 115.412(1)(F)	as exempted in §115.411.			
PROPSB1	PRO	R5450EXEMPT	VOC	30 TAC Chapter 115, Subchapter E, Division 5	§ 115.453(a)(1)(C)-Table 1 § 115.453(a) § 115.453(a)(1) § 115.453(a)(1)(C) § 115.453(d)(1) § 115.453(d)(1)(A) § 115.453(d)(1)(B) § 115.453(d)(1)(C) § 115.453(d)(1)(D) § 115.453(d)(1)(E) § 115.453(d)(2) § 115.453(d)(2)(A) § 115.453(d)(2)(B) § 115.453(d)(2)(C) § 115.453(d)(2)(D) § 115.453(d)(2)(E) § 115.453(d)(2)(F) § 115.453(d)(2)(G)	The VOC content of air-dried coating applied to miscellaneous metal parts and products shall not exceed the pounds of VOC per gallon of coating listed in Table 1.	§ 115.455(a) [G]§ 115.455(a)(1) § 115.455(a)(5) § 115.455(b)	§ 115.458(b)(1) § 115.458(b)(2) § 115.458(b)(6) § 115.458(b)(7)	None
PROPSB1	PRO	R5450NORMAL	VOC	30 TAC Chapter 115, Subchapter E, Division 5	§ 115.453(a)(1)(C)-Table 1 § 115.453(a) § 115.453(a)(1) § 115.453(a)(1)(C) [G]§ 115.453(c) § 115.453(d)(1) § 115.453(d)(1)(A) § 115.453(d)(1)(B) § 115.453(d)(1)(C) § 115.453(d)(1)(D) § 115.453(d)(1)(E) § 115.453(d)(2) § 115.453(d)(2)(A) § 115.453(d)(2)(B) § 115.453(d)(2)(C) § 115.453(d)(2)(D) § 115.453(d)(2)(E)	The VOC content of air-dried coating applied to miscellaneous metal parts and products shall not exceed the pounds of VOC per gallon of coating listed in Table 1.	§ 115.455(a) [G]§ 115.455(a)(1) § 115.455(a)(5) § 115.455(b)	§ 115.458(b)(1) § 115.458(b)(2) § 115.458(b)(6) § 115.458(b)(7)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 115.453(d)(2)(F) § 115.453(d)(2)(G)				

Additional Monitoring Requirements

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRPTC	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111HIFLO
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)
Monitoring Information	
Indicator: Visible Emissions	
Minimum Frequency: Once per week	
Averaging Period: N/A	
Deviation Limit: Opacity shall not exceed 15% averaged over a six-minute period.	
Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If a Test Method 9 is performed, the opacity limit is the corresponding opacity limit associated with the particulate matter standard in the underlying applicable requirement. If there is no corresponding opacity limit in the underlying applicable requirement, the maximum opacity will be established using the most recent performance test. If the result of the Test Method 9 is opacity above the corresponding opacity limit (associated with the particulate matter standard in the underlying applicable requirement or as identified as a result of a previous performance test to establish the maximum opacity limit), the permit holder shall report a deviation.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: PC3	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Degreasing Processes	SOP Index No.: R5412
Pollutant: VOC	Main Standard: § 115.412(1)
Monitoring Information	
Indicator: Visual Inspection	
Minimum Frequency: Monthly	
Averaging Period: N/A	
Deviation Limit: Any monitoring data which indicates that the cold cleaner is not in compliance with the applicable requirements of 30 TAC §115.412(1)(A)-(F) shall be considered and reported as a deviation.	
Periodic Monitoring Text: Inspect equipment and record data monthly to ensure compliance with any applicable requirements in § 115.412(1)(A)-(F). Any monitoring data which indicates that the cold cleaner is not in compliance with the applicable requirements of § 115.412(1)(A)-(F) shall be considered and reported as a deviation.	

New Source Review Authorization References

New Source Review Authorization References

The New Source Review authorizations listed in the table below are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Prevention of Significant Deterioration (PSD) Permits	
PSD Permit No.: PSDTX1590M1	Issuance Date: 02/25/2025
Nonattainment (NA) Permits	
NA Permit No.: N196M2	Issuance Date: 02/25/2025
Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.	
Authorization No.: 20041	Issuance Date: 02/25/2025
Permits By Rule (30 TAC Chapter 106) for the Application Area	
Number: 75	Version No./Date: 03/15/1985
Number: 106.227	Version No./Date: 09/04/2000
Number: 106.263	Version No./Date: 11/01/2001
Number: 106.265	Version No./Date: 09/04/2000
Number: 106.375	Version No./Date: 09/04/2000
Number: 106.412	Version No./Date: 09/04/2000
Number: 106.454	Version No./Date: 11/01/2001
Number: 106.472	Version No./Date: 09/04/2000
Number: 106.511	Version No./Date: 09/04/2000

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization**
DFT1	DIESEL FUEL STORAGE TANK	106.472/09/04/2000
DFT2	DIESEL FUEL STORAGE TANK	106.472/09/04/2000
DIESEL UNL	DIESEL FUEL UNLOADING OPERATIONS	106.472/09/04/2000
EC1	ECOCLEAN AQUEOUS CLEANER	106.375/09/04/2000
EG2	EMERGENCY GENERATOR	106.511/09/04/2000
PC3	PARTS CLEANER	106.454/11/01/2001
PRE-HFF1	PRE-FLARE HFF1 VENT	20041, PSDTX1590M1, N196M2
PRE-TC6F	PRE-FLARE TC6F VENT	20041, PSDTX1590M1, N196M2
PRE-TC7F	PRE-FLARE TC7F VENT	20041, PSDTX1590M1, N196M2
PROPSB1	PAINT SPRAY BOOTH	75/03/15/1985 [16458]
S1	OIL / WATER SEPARATOR	20041, PSDTX1590M1, N196M2
S2	OIL / WATER SEPARATOR	20041, PSDTX1590M1, N196M2
S3	OIL / WATER SEPARATOR	20041, PSDTX1590M1, N196M2
TC1	TEST CELL NO. 1	20041, PSDTX1590M1, N196M2
TC4	TEST CELL NO. 4	20041, PSDTX1590M1, N196M2
TC5	TEST CELL NO. 5	20041, PSDTX1590M1, N196M2
TC6	TEST CELL NO. 6	20041, PSDTX1590M1, N196M2
TC7	TEST CELL NO. 7	20041, PSDTX1590M1, N196M2

**This column may include Permit by Rule (PBR) numbers and version dates, PBR Registration numbers in brackets, Standard Permit Registration numbers, Minor NSR permit numbers, and Major NSR permit numbers.

Appendix A

Acronym List

The following abbreviations or acronyms may be used in this permit:

ACFM ..... actual cubic feet per minute
AMOC ..... alternate means of control
ARP ..... Acid Rain Program
ASTM ..... American Society of Testing and Materials
B/PA ..... Beaumont/Port Arthur (nonattainment area)
CAM ..... Compliance Assurance Monitoring
CD ..... control device
CEMS ..... continuous emissions monitoring system
CFR ..... Code of Federal Regulations
COMS ..... continuous opacity monitoring system
CVS ..... closed vent system
D/FW ..... Dallas/Fort Worth (nonattainment area)
EP ..... emission point
EPA ..... U.S. Environmental Protection Agency
EU ..... emission unit
FCAA Amendments ..... Federal Clean Air Act Amendments
FOP ..... federal operating permit
gr/100 scf ..... grains per 100 standard cubic feet
HAP ..... hazardous air pollutant
H/G/B ..... Houston/Galveston/Brazoria (nonattainment area)
H_2S ..... hydrogen sulfide
ID No. ..... identification number
lb/hr ..... pound(s) per hour
MACT ..... Maximum Achievable Control Technology (40 CFR Part 63)
MMBtu/hr ..... Million British thermal units per hour
NA ..... nonattainment
N/A ..... not applicable
NADB ..... National Allowance Data Base
NESHAP ..... National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61)
NO_x ..... nitrogen oxides
NSPS ..... New Source Performance Standard (40 CFR Part 60)
NSR ..... New Source Review
ORIS ..... Office of Regulatory Information Systems
Pb ..... lead
PBR ..... Permit By Rule
PEMS ..... predictive emissions monitoring system
PM ..... particulate matter
ppmv ..... parts per million by volume
PRO ..... process unit
PSD ..... prevention of significant deterioration
psia ..... pounds per square inch absolute
SIP ..... state implementation plan
SO_2 ..... sulfur dioxide
TCEQ ..... Texas Commission on Environmental Quality
TSP ..... total suspended particulate
TVP ..... true vapor pressure
U.S.C. ..... United States Code
VOC ..... volatile organic compound

Appendix B

Major NSR Summary Table

Permit Number 20041, N196M2, and PSDTX1590M1					Issuance Date: February 25, 2025		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
TC1	Test Cell 1 Gas fuel firing	NO_x	106.9	-	2, 3, 9	9, 10	
		CO	84.8	-			
		VOC	46.6	-			
		PM	5.3	-			
		PM_{10}	5.3	-			
		$PM_{2.5}$	5.3	-			
		SO_2	2.0	-			
TC1	Test Cell 1 Liquid fuel firing	NO_x	181.5	-	2, 3, 9	9, 10	
		CO	88.8	-			
		VOC	20.4	-			
		PM	15.7	-			
		PM_{10}	15.7	-			
		$PM_{2.5}$	15.7	-			
		SO_2	7.5	-			

Major NSR Summary Table

Permit Number 20041, N196M2, and PSDTX1590M1					Issuance Date: February 25, 2025		
Emission Point No. (1)	**Source Name (2)**	**Air Contaminant Name (3)**	**Emission Rates**		**Monitoring and Testing Requirements**	**Recordkeeping Requirements**	**Reporting Requirements**
			lb/hr	**TPY (4)**	**Special Condition/Application Information**	**Special Condition/Application Information**	**Special Condition/Application Information**
TC1	Test Cell 1 - Annual Emission Rate Gas and Liquid Fuel Firing	NO_x	-	100.2	2, 3, 9	9, 10	14
		CO	-	27.7			
		VOC	-	9.4			
		PM	-	10.7			
		PM_{10}	-	10.7			
		$PM_{2.5}$	-	10.7			
		SO_2	-	2.9			
TC2	Test Cell 2 Gas Fuel Firing	NO_x	8.7	-	2, 3, 9	9, 10	
		CO	18.4	-			
		VOC	4.7	-			
		PM	0.7	-			
		PM_{10}	0.7	-			
		$PM_{2.5}$	0.7	-			
		SO_2	0.4	-			

Major NSR Summary Table

Permit Number 20041, N196M2, and PSDTX1590M1					Issuance Date: February 25, 2025		
Emission Point No. (1)	**Source Name (2)**	**Air Contaminant Name (3)**	**Emission Rates**		**Monitoring and Testing Requirements**	**Recordkeeping Requirements**	**Reporting Requirements**
			lb/hr	**TPY (4)**	**Special Condition/Application Information**	**Special Condition/Application Information**	**Special Condition/Application Information**
TC2	Test Cell 2 Liquid Fuel Firing	NO_x	13.0	-	2, 3, 9	9, 10	
		CO	37.0	-			
		VOC	4.7	-			
		PM	3.5	-			
		PM_{10}	3.5	-			
		$PM_{2.5}$	3.5	-			
		SO_2	1.5	-			
TC2	Test Cell 2 – Annual Emission Rates Gas and Liquid Fuel Firing	NO_x	-	8.7	2, 3, 9	9, 10	14
		CO	-	9.2			
		VOC	-	0.9			
		PM	-	1.9			
		PM_{10}	-	1.9			
		$PM_{2.5}$	-	1.9			
		SO_2	-	0.8			

Major NSR Summary Table

Permit Number 20041, N196M2, and PSDTX1590M1					Issuance Date: February 25, 2025		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
TC3	Test Cell 3 Gas Fuel Firing	NO_x	80.0	-	2, 3, 9	9, 10	
		CO	84.8	-			
		VOC	13.5	-			
		PM	2.5	-			
		PM_{10}	2.5	-			
		$PM_{2.5}$	2.5	-			
		SO_2	1.1	-			
TC3	Test Cell 3 Liquid Fuel Firing	NO_x	120.0	-	2, 3, 9	9, 10	
		CO	45.6	-			
		VOC	7.2	-			
		PM	15.7	-			
		PM_{10}	15.7	-			
		$PM_{2.5}$	15.7	-			
		SO_2	4.8	-			

Major NSR Summary Table

Permit Number 20041, N196M2, and PSDTX1590M1					Issuance Date: February 25, 2025		
Emission Point No. (1)	**Source Name (2)**	**Air Contaminant Name (3)**	**Emission Rates**		**Monitoring and Testing Requirements**	**Recordkeeping Requirements**	**Reporting Requirements**
			lb/hr	**TPY (4)**	**Special Condition/Application Information**	**Special Condition/Application Information**	**Special Condition/Application Information**
TC3	Test Cell 3 – Annual Emission Rates Gas and Liquid Fuel Firing	NO_x	-	35.9	2, 3, 9	9, 10	14
		CO	-	19.4			
		VOC	-	1.8			
		PM	-	10.7			
		PM_{10}	-	10.7			
		$PM_{2.5}$	-	10.7			
		SO_2	-	2.7			
TC4	Test Cell 4 Gas Fuel Firing	NO_x	106.9	-	2, 3, 9	9, 10	
		CO	84.8	-			
		VOC	46.6	-			
		PM	5.3	-			
		PM_{10}	5.3	-			
		$PM_{2.5}$	5.3	-			
		SO_2	2.0	-			

Major NSR Summary Table

Permit Number 20041, N196M2, and PSDTX1590M1					Issuance Date: February 25, 2025		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
TC4	Test Cell 4 Liquid Fuel Firing	NO_x	181.5	-	2, 3, 9	9, 10	
		CO	41.3	-			
		VOC	14.3	-			
		PM	15.7	-			
		PM_{10}	15.7	-			
		$PM_{2.5}$	15.7	-			
		SO_2	7.5	-			
TC4	Test Cell 4 Gas and Liquid Fuel Firing	NO_x	-	100.2	2, 3, 9	9, 10	14
		CO	-	27.7			
		VOC	-	9.4			
		PM	-	10.7			
		PM_{10}	-	10.7			
		$PM_{2.5}$	-	10.7			
		SO_2	-	2.9			

Major NSR Summary Table

Permit Number 20041, N196M2, and PSDTX1590M1					Issuance Date: February 25, 2025		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
TC5	Test Cell 5 Gas Fuel Firing	NO_x	192.8	-	2, 3, 9	9, 10	
		CO	30.0	-			
		VOC	8.8	-			
		PM	8.5	-			
		PM_{10}	8.5	-			
		$PM_{2.5}$	8.5	-			
		SO_2	3.8	-			
TC5	Test Cell 5 Liquid Fuel Firing	NO_x	338.8	-	2, 3, 9	9, 10	
		CO	30.0	-			
		VOC	8.8	-			
		PM	12.1	-			
		PM_{10}	12.1	-			
		$PM_{2.5}$	12.1	-			
		SO_2	14.1	-			

Major NSR Summary Table

Permit Number 20041, N196M2, and PSDTX1590M1					Issuance Date: February 25, 2025		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
TC5	Test Cell 5 – Annual Emission Rates Gas and Liquid Fuel Firing	NO_x	-	74.53	2, 3, 9	9, 10	14
		CO	-	25.48			
		VOC	-	5.81			
		PM	-	7.49			
		PM_{10}	-	7.49			
		$PM_{2.5}$	-	7.49			
		SO_2	-	4.15			
TC6	Test Cell 6 Gas Fuel Firing	NO_x	949.83	-	2, 3, 9	9, 10	
		CO	1415.08	-			
		VOC	16.17	-			
		PM	4.21	-			
		PM_{10}	4.21	-			
		$PM_{2.5}$	4.21	-			
		SO_2	3.04	-			

Major NSR Summary Table

Permit Number 20041, N196M2, and PSDTX1590M1					Issuance Date: February 25, 2025		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
TC6	Test Cell 6 Liquid Fuel Firing	NO_x	409.53	-	2, 3, 9	9, 10	
		CO	417.12	-			
		VOC	31.78	-			
		PM	13.60	-			
		PM_{10}	13.60	-			
		$PM_{2.5}$	13.60	-			
		SO_2	0.35	-			
TC6	Test Cell 6 – Annual Emission Rates Gas and Liquid Fuel Firing	NO_x	-	39.78	2, 3, 9	9, 10	14
		CO	-	49.46			
		VOC	-	4.03			
		PM	-	9.88			
		PM_{10}	-	9.88			
		$PM_{2.5}$	-	9.88			
		SO_2	-	5.24			

Major NSR Summary Table

Permit Number 20041, N196M2, and PSDTX1590M1					Issuance Date: February 25, 2025		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
TC7	Test Cell 7 Gas Fuel Firing	NO_x	1978.02	-	2, 3, 9	9, 10	
		CO	1410.31	-			
		VOC	107.07	-			
		PM	3.66	-			
		PM_{10}	3.66	-			
		$PM_{2.5}$	3.66	-			
		SO_2	4.92	-			
TC7	Test Cell 7 Liquid Fuel Firing	NO_x	989.01	-	2, 3, 9	9, 10	
		CO	1645.36	-			
		VOC	535.35	-			
		PM	8.22	-			
		PM_{10}	8.22	-			
		$PM_{2.5}$	8.22	-			
		SO_2	0.60	-			

Major NSR Summary Table

Permit Number 20041, N196M2, and PSDTX1590M1					Issuance Date: February 25, 2025		
Emission Point No. (1)	**Source Name (2)**	**Air Contaminant Name (3)**	**Emission Rates**		**Monitoring and Testing Requirements**	**Recordkeeping Requirements**	**Reporting Requirements**
			lb/hr	**TPY (4)**	**Special Condition/Application Information**	**Special Condition/Application Information**	**Special Condition/Application Information**
TC7	Test Cell 7 – Annual Emission Rates Gas and Liquid Fuel Firing	NO_x	-	24.31	2, 3, 9	9, 10	14
		CO	-	99.19			
		VOC	-	10.37			
		PM	-	2.15			
		PM_{10}	-	2.15			
		$PM_{2.5}$	-	2.15			
		SO_2	-	2.09			
TC7	Test Cell 7 – Annual Emission Rates Gas and Liquid Fuel Firing – 2025 and 2026 (5)	NO_x	-	48.31	2, 3, 9	9, 10	14
		CO	-	99.19			
		VOC	-	10.37			
		PM	-	2.15			
		PM_{10}	-	2.15			
		$PM_{2.5}$	-	2.15			
		SO_2	-	2.09			

Major NSR Summary Table

Permit Number 20041, N196M2, and PSDTX1590M1					Issuance Date: February 25, 2025		
Emission Point No. (1)	**Source Name (2)**	**Air Contaminant Name (3)**	**Emission Rates**		**Monitoring and Testing Requirements**	**Recordkeeping Requirements**	**Reporting Requirements**
			lb/hr	**TPY (4)**	**Special Condition/Application Information**	**Special Condition/Application Information**	**Special Condition/Application Information**
TC7	Test Cell 7 – Annual Emission Rates Gas and Liquid Fuel Firing – 2027 (6)	NO_x	-	73.46	2, 3, 9	9, 10	14
		CO	-	99.19			
		VOC	-	10.37			
		PM	-	2.15			
		PM_{10}	-	2.15			
		$PM_{2.5}$	-	2.15			
		SO_2	-	2.09			
TC7	Test Cell 7 – Annual Emission Rates Gas and Liquid Fuel Firing – 2028 (7)	NO_x	-	82.15	2, 3, 9	9, 10	14
		CO	-	99.19			
		VOC	-	10.37			
		PM	-	2.15			
		PM_{10}	-	2.15			
		$PM_{2.5}$	-	2.15			
		SO_2	-	2.09			

Major NSR Summary Table

Permit Number 20041, N196M2, and PSDTX1590M1					Issuance Date: February 25, 2025		
Emission Point No. (1)	**Source Name (2)**	**Air Contaminant Name (3)**	**Emission Rates**		**Monitoring and Testing Requirements**	**Recordkeeping Requirements**	**Reporting Requirements**
			lb/hr	**TPY (4)**	**Special Condition/Application Information**	**Special Condition/Application Information**	**Special Condition/Application Information**
TC7	Test Cell 7 – Annual Emission Rates (8) Gas and Liquid Fuel Firing – 2029 and thereafter	NO_x	-	96.69	2, 3, 9	9, 10	14
		CO	-	99.19			
		VOC	-	10.37			
		PM	-	2.15			
		PM_{10}	-	2.15			
		$PM_{2.5}$	-	2.15			
		SO_2	-	2.09			
TC6F	Test Cell No. 6 Flare	NO_x	0.90	0.01			14
		CO	4.10	0.05			
		VOC	0.12	<0.01			
		SO_2	0.19	<0.01			
TC7F	Test Cell No. 7 Flare	NO_x	0.90	0.01			14
		CO	4.10	0.05			
		VOC	0.12	<0.01			

Major NSR Summary Table

Permit Number 20041, N196M2, and PSDTX1590M1					Issuance Date: February 25, 2025		
Emission Point No. (1)	**Source Name (2)**	**Air Contaminant Name (3)**	**Emission Rates**		**Monitoring and Testing Requirements**	**Recordkeeping Requirements**	**Reporting Requirements**
			lb/hr	**TPY (4)**	**Special Condition/Application Information**	**Special Condition/Application Information**	**Special Condition/Application Information**
		SO_2	0.19	<0.01			
HFF1	Hydrogen Farm Flare	NO_x	6.15	0.07			14
		CO	28.02	0.34			
		VOC	0.80	0.01			
		SO_2	1.30	0.02			
F1	TC1, TC3-5 Process Fugitives (9)	VOC	0.6	0.3			
F2	TC2 Process Fugitives (9)	VOC	0.3	0.1			
F3	TC6 Process Fugitives (9)	VOC	0.01	0.01			
S1	Oil/Water Separator	VOC	0.1	0.3			
S2	TC6 Oil/Water Separator	VOC	0.01	0.05			
S3	TC7 Oil/Water Separator	VOC	0.01	0.05			
CT1	Cooling Tower	VOC	0.08	0.37			

Major NSR Summary Table

Permit Number 20041, N196M2, and PSDTX1590M1					Issuance Date: February 25, 2025		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		PM	0.60	2.63			
		PM_{10}	0.15	0.66			
		$PM_{2.5}$	0.01	0.03			
		Cl_2	<0.01	<0.01			
CT3	Cooling Tower	VOC	0.1	0.4			
		PM	0.60	2.63			
		PM_{10}	0.15	0.66			
		$PM_{2.5}$	0.01	0.03			
		Cl_2	<0.01	<0.01			
CT4	TC6 Cooling Tower	VOC	0.08	0.37			
		PM	0.06	0.26			
		PM_{10}	0.02	0.09			
		$PM_{2.5}$	<0.01	<0.01			
		Cl_2	<0.01	<0.01			

Major NSR Summary Table

Permit Number 20041, N196M2, and PSDTX1590M1					Issuance Date: February 25, 2025		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
CT5	TC7 Cooling Tower No. 5	VOC	0.08	0.37			
		PM	0.06	0.26			
		PM_{10}	0.02	0.07			
		$PM_{2.5}$	<0.01	<0.01			
		Cl_2	<0.01	<0.01			

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.
(3) NO_x - total oxides of nitrogen
CO - carbon monoxide
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$
PM_{10} - total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
SO_2 - sulfur dioxide
Cl_2 - chlorine
(4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
(5) Emission rates for EPN: TC7 are effective for calendar years 2025-2026, and/or for the subsequent calendar year following approval from TCEQ EBT for the NOx emission credits.
(6) Emission rates for EPN: TC7 are effective for calendar year 2027, and/or for the subsequent calendar year following approval from TCEQ EBT for the NOx emission credits.
(7) Emission rates for EPN: TC7 are effective for calendar year 2028, and/or for the subsequent calendar year following approval from TCEQ EBT for the NOx emission credits.
(8) Emission rates for EPN: TC7 are effective for calendar year 2029 and thereafter, following approval from TCEQ EBT for the NOx emission credits.
(9) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

Texas Commission on Environmental Quality
Air Quality Permit

A Permit Is Hereby Issued To
Solar Turbines Incorporated
Authorizing the Construction and Operation of
Solar Turbines Dallas Overhaul Center
Located at **Desoto, Dallas County, Texas**
Latitude 32.6275 Longitude -96.850277

Permits: 20041, N196M2 and PSDTX1590M1

Amendment Date: February 25, 2025

Expiration Date: December 23, 2025

For the Commission

1. **Facilities** covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code (TAC) Section 116.116 (30 TAC § 116.116)] [1]
2. **Voiding of Permit**. A permit or permit amendment is automatically void if the holder fails to begin construction within 18 months of the date of issuance, discontinues construction for more than 18 months prior to completion, or fails to complete construction within a reasonable time. Upon request, the executive director may grant an 18-month extension. Before the extension is granted the permit may be subject to revision based on best available control technology, lowest achievable emission rate, and netting or offsets as applicable. One additional extension of up to 18 months may be granted if the permit holder demonstrates that emissions from the facility will comply with all rules and regulations of the commission, the intent of the Texas Clean Air Act (TCAA), including protection of the public's health and physical property; and (b)(1)the permit holder is a party to litigation not of the permit holder's initiation regarding the issuance of the permit; or (b)(2) the permit holder has spent, or committed to spend, at least 10 percent of the estimated total cost of the project up to a maximum of $5 million. A permit holder granted an extension under subsection (b)(1) of this section may receive one subsequent extension if the permit holder meets the conditions of subsection (b)(2) of this section. [30 TAC § 116.120]
3. **Construction Progress**. Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office of the commission not later than 15 working days after occurrence of the event. [30 TAC § 116.115(b)(2)(A)]
4. **Start-up Notification**. The appropriate air program regional office shall be notified prior to the commencement of operations of the facilities authorized by the permit in such a manner that a representative of the commission may be present. The permit holder shall provide a separate notification for the commencement of operations for each unit of phased construction, which may involve a series of units commencing operations at different times. Prior to operation of the facilities authorized by the permit, the permit holder shall identify the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program). [30 TAC § 116.115(b)(2)(B)]
5. **Sampling Requirements**. If sampling is required, the permit holder shall contact the commission's Office of Compliance and Enforcement prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant. [30 TAC § 116.115(b)(2)(C)]
6. **Equivalency of Methods.** The permit holder must demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the permit. Alternative methods shall be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the permit. [30 TAC § 116.115(b)(2)(D)]
7. **Recordkeeping.** The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and

operating hours; keep all required records in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application; make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction in a timely manner; comply with any additional recordkeeping requirements specified in special conditions in the permit; and retain information in the file for at least two years following the date that the information or data is obtained. [30 TAC § 116.115(b)(2)(E)]

8. **Maximum Allowable Emission Rates**. The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled "Emission Sources--Maximum Allowable Emission Rates." [30 TAC § 116.115(b)(2)(F)] [1]
9. **Maintenance of Emission Control**. The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification in accordance with 30 TAC §101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC§ 116.115(b)(2)(G)]
10. **Compliance with Rules**. Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC § 116.115(b)(2)(H)]
11. **This** permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC § 116.110(e)]
12. **There** may be additional special conditions attached to a permit upon issuance or modification of the permit. Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC § 116.115(c)]
13. **Emissions** from this facility must not cause or contribute to "air pollution" as defined in Texas Health and Safety Code (THSC) §382.003(3) or violate THSC § 382.085. If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.
14. **The** permit holder shall comply with all the requirements of this permit. Emissions that exceed the limits of this permit are not authorized and are violations of this permit. [1]

[1] Please be advised that the requirements of this provision of the general conditions may not be applicable to greenhouse gas emissions.

Common Acronyms in Air Permits

°C = Temperature in degrees Celsius
°F = Temperature in degrees Fahrenheit
°K = Temperature in degrees Kelvin
µg = microgram
$\mu g/m^3$ = microgram per cubic meter
acfm = actual cubic feet per minute
AMOC = alternate means of control
AOS = alternative operating scenario
AP-42 = Air Pollutant Emission Factors, 5th edition
APD = Air Permits Division
API = American Petroleum Institute
APWL = air pollutant watch list
BPA = Beaumont/ Port Arthur
BACT = best available control technology
BAE = baseline actual emissions
bbl = barrel
bbl/day = barrel per day
bhp = brake horsepower
BMP = best management practices
Btu = British thermal unit
Btu/scf = British thermal unit per standard cubic foot or feet
CAA = Clean Air Act
CAM = compliance-assurance monitoring
CEMS = continuous emissions monitoring systems
cfm = cubic feet (per) minute
CFR = Code of Federal Regulations
CN = customer ID number
CNG = compressed natural gas
CO = carbon monoxide
COMS = continuous opacity monitoring system
CPMS = continuous parametric monitoring system
DFW = Dallas/ Fort Worth (Metroplex)
DE = destruction efficiency
DRE = destruction and removal efficiency
dscf = dry standard cubic foot or feet
dscfm = dry standard cubic foot or feet per minute
ED = (TCEQ) Executive Director
EF = emissions factor
EFR = external floating roof tank
EGU = electric generating unit
EI = Emissions Inventory
ELP = El Paso
EPA = (United States) Environmental Protection Agency
EPN = emission point number
ESL = effects screening level
ESP = electrostatic precipitator
FCAA = Federal Clean Air Act
FCCU = fluid catalytic cracking unit
FID = flame ionization detector
FIN = facility identification number
ft = foot or feet
ft/sec = foot or feet per second
g = gram
gal/wk = gallon per week
gal/yr = gallon per year
GLC = ground level concentration
GLC_{max} = maximum (predicted) ground-level concentration
gpm = gallon per minute
gr/1000scf = grain per 1000 standard cubic feet
gr/dscf = grain per dry standard cubic feet
H_2CO = formaldehyde
H_2S = hydrogen sulfide
H_2SO_4 = sulfuric acid
HAP = hazardous air pollutant as listed in § 112(b) of the Federal Clean Air Act or Title 40 Code of Federal Regulations Part 63, Subpart C
HC = hydrocarbons
HCl = hydrochloric acid, hydrogen chloride
Hg = mercury
HGB = Houston/Galveston/Brazoria
hp = horsepower
hr = hour
IFR = internal floating roof tank
in H_2O = inches of water
in Hg = inches of mercury
IR = infrared
ISC3 = Industrial Source Complex, a dispersion model
ISCST3 = Industrial Source Complex Short-Term, a dispersion model
K = Kelvin; extension of the degree Celsius scaled-down to absolute zero
LACT = lease automatic custody transfer
LAER = lowest achievable emission rate
lb = pound
lb/day = pound per day
lb/hr = pound per hour
lb/MMBtu = pound per million British thermal units
LDAR = Leak Detection and Repair (Requirements)
LNG = liquefied natural gas
LPG = liquefied petroleum gas
LT/D = long ton per day
m = meter
m^3 = cubic meter
m/sec = meters per second
MACT = maximum achievable control technology
MAERT = Maximum Allowable Emission Rate Table
MERA = Modeling and Effects Review Applicability
mg = milligram
mg/g = milligram per gram
mL = milliliter
MMBtu = million British thermal units
MMBtu/hr = million British thermal units per hour
MSDS = material safety data sheet
MSS = maintenance, startup, and shutdown
MW = megawatt
NAAQS = National Ambient Air Quality Standards
NESHAP = National Emission Standards for Hazardous Air Pollutants
NGL = natural gas liquids
NNSR = nonattainment new source review
NO_x = total oxides of nitrogen
NSPS = New Source Performance Standards

PAL = plant-wide applicability limit
PBR = Permit(s) by Rule
PCP = pollution control project
PEMS = predictive emission monitoring system
PID = photo ionization detector
PM = periodic monitoring
PM = total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
$PM_{2.5}$ = particulate matter equal to or less than 2.5 microns in diameter
PM_{10} = total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
POC = products of combustion
ppb = parts per billion
ppm = parts per million
ppmv = parts per million (by) volume
psia = pounds (per) square inch, absolute
psig = pounds (per) square inch, gage
PTE = potential to emit
RA = relative accuracy
RATA = relative accuracy test audit
RM = reference method
RVP = Reid vapor pressure
scf = standard cubic foot or feet
scfm = standard cubic foot or feet (per) minute
SCR = selective catalytic reduction
SIL = significant impact levels
SNCR = selective non-catalytic reduction
SO_2 = sulfur dioxide
SOCMI = synthetic organic chemical manufacturing industry
SRU = sulfur recovery unit
TAC = Texas Administrative Code
TCAA = Texas Clean Air Act
TCEQ = Texas Commission on Environmental Quality
TD = Toxicology Division
TLV = threshold limit value
TMDL = total maximum daily load
tpd = tons per day
tpy = tons per year
TVP = true vapor pressure
VOC = volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
VRU = vapor recovery unit or system

Special Conditions

Permit Number 20041, N196M2, and PSDTX1590M1

Emission Standards

1. This permit covers only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates (MAERT)," and those sources are limited to the emission limits and other conditions specified in that attached table. Compliance with the annual emission limits shall be based on a rolling 12-month year rather than the calendar year.

   If any condition or limitation of this permit or of any Texas Commission on Environmental Quality (TCEQ) regulation is more stringent than another, then the more stringent condition or limitation shall govern and be the standard by which compliance will be demonstrated.

Opacity / Visible Emissions

2. Opacity of emissions from Emission Point Nos. (EPNs): TC2 and TC3 must not exceed 20 percent; EPNs: TC1, TC4, TC6 and TC7 must not exceed 15 percent and EPN: TC5 must not exceed 10 percent averaged over a six-minute period except for those periods described in Title 30 Texas Administrative Code § 111.111(a)(1)(E). Opacity shall be determined by using the U.S. Environmental Protection Agency Method 9. **(08/21)**

3. A visual check of the test cell exhaust shall be made on each turbine immediately after startup, while idling, and at each test load. If excess visible emissions are expected to be present for more than the six minutes allowed in 30 TAC § 111.111(a)(1)(E) for the initial start-up, or if excess visible emissions occur while idling or after a test load change, the unit under test shall be shut down as soon as practicable and not restarted until the cause of the excess emissions has been corrected. **(08/21)**

Fuel Limitations

4. Fuel fired in each turbine undergoing testing is limited to one of the following at any time:

   A. Pipeline-quality, sweet natural gas and other gaseous fuels (propane and butane) containing no more than 5.0 grains total sulfur per 100 dry standard cubic feet. In blends, each gaseous fuel must contain no more than 5.0 grains total sulfur per 100 dry standard cubic feet. **(02/25)**

   B. Distillate fuel oil for EPNs: TC1 through TC7 is limited to a sulfur content of 15 parts per million, wet. **(07/24)**

   C. Distillate fuel oil firing is limited as follows: **(08/21)**

      (1) Distillate fuel oil shall not be fired in EPNs TC1 through TC5 for more than a total of 16 hours per 24-hour period;

      (2) No more than two test cells among EPNs TC1 through TC5 shall fire distillate fuel oil concurrently;

      (3) Distillate fuel firing in EPN TC7 shall not occur when distillate fuel is also fired in more than two other cells among EPNs TC1 through TC6.

   D. Hydrogen fuel shall contain no sulfur compounds. In blended hydrogen and natural gas operations, natural gas shall contain no more than 5 grains of total sulfur per 100 dry standard cubic feet. **(02/25)**

Operational Limitations

5. All parking lots and plant roads shall be paved and regularly cleaned to achieve maximum control of dust emissions.

6. Contaminated lubricating oil drained from the turbines shall be washed down the waste oil handling system as soon as practicable.

7. All lubricating oil and fuel oil spills shall be cleaned up immediately or washed into the waste oil handling system as soon as practicable.

8. Waste lubricating oil shall be stored in closed containers until shipped off-site by an authorized waste disposal service.

9. Hydrogen gas fuel testing shall only occur for turbines operated in Test Cell 6 and Test Cell 7. Hydrogen gas fuel testing shall not occur simultaneously at both Test Cell 6 and Test Cell 7. **(02/25)**

10. Waste gas flow to each flare (EPN TC6F, TC7F, and HFF1) shall be limited to 24 hours of operation per rolling 12-month period. Test Cell No. 6 Flare (EPN TC6F) and Test Cell No. 7 Flare (EPN TC7F) shall not be operated simultaneously. As an alternative to the 24-hour limit, calculations can be maintained to demonstrate compliance with the annual emission limits on the MAERT, provided the annual emission rates are determined and recorded using the actual gas flow rates and the emission factors used in the permit amendment application, PI-1 dated June 26, 2024. Actual flow rates shall be determined using flow monitors or by engineering calculations. At a minimum, emission calculations shall include estimated flow rates, gas heat content, hours of operation, and estimated emissions. **(02/25)**

Continuous Demonstration of Compliance

11. To demonstrate compliance with Special Condition No. 1, actual emissions of nitrogen oxides, carbon monoxide, volatile organic compounds, and particulate matter from each test cell will be calculated according to the following formula: **(08/10)**

    Emissions = Nominal or Engine-Specific Emission Factor x Actual Fuel Usage during the Test

    A. Emissions must be in pounds per hour (lb/hr);

    B. The emission factor must be in pounds of pollutant per pound of fuel (lb of emissions/lb of fuel), pounds of emissions per million British thermal units (lb of emissions/MMBtu), or pounds per hour (lb/hr) for specific engine loadings. The emission factors must be pollutant specific, considering the fuel type and emission controls, and be the nominal emission factors used to develop guaranteed emission levels provided to customers or engine-specific emission factors. These factors are to be derived from the manufacturer's emission test database or from an emissions model if the turbines have not been tested before, and these factors may be corrected for ambient conditions at the test cell. Weighted emissions factors, based on the usual variation in load ratings for the development and production tests, may be used as an alternate emission calculation method provided that records of the alternate method are maintained. **(07/24)**

C. The actual fuel usage during the test will be expressed in pounds or MMBtu per hour (lb/hr or MMBtu/hr), as applicable, depending on the units used in Special Condition No. 11.B, above.

Actual emissions of sulfur dioxide (SO_2) will be calculated by assuming that the fuel has the maximum sulfur content allowed under Special Condition No. 4 and that 100 percent of the sulfur in the fuel is converted to SO_2, or by using the actual sulfur content of the fuel used on site provided that records of the sulfur content of the fuel are provided by the fuel supplier. The permit holder may base these calculations either on full load fuel consumption for the duration of the test, on the actual fuel consumption during each test, or on the mass emission rates expected for each load that that an engine is tested. Weighted emissions factors, based on the usual variation in load ratings for the development and production tests, may be used as an alternate emission calculation method provided that records of the alternate method are maintained. **(07/24)**

Hydrogen Flares (02/25)

12. Flares shall be designed and operated in accordance with the following requirements:

A. The Test Cell No. 6 Flare (EPN TC6F), the Test Cell No. 7 Flare (EPN TC7F), and the Hydrogen Farm Flare (EPN HFF1) shall be limited to receiving and burning natural gas and hydrogen fuel blend streams.

B. The flare systems shall be designed such that the combined natural gas and hydrogen stream to each flare meets the 40 CFR § 60.18 specifications of minimum heating value and maximum tip velocity at all times when emissions may be vented to them.

C. The heating value and velocity requirements shall be satisfied during operations authorized by this permit. The flare shall be operated with a flame present and/or have a constant pilot flame at times that gas flow to the flares is expected. The pilot flame, when operating, shall be continuously monitored by a thermocouple, infrared monitor, or ultraviolet monitor. The time, date, and duration of any loss of pilot flame shall be recorded. To the extent practicable, each monitoring device shall be accurate to, and shall be calibrated at a frequency in accordance with, the manufacturer's specifications.

D. The flare shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours.

Recordkeeping Requirements

13. In addition to the recordkeeping requirements specified in General Condition No. 7, the following records shall be maintained at the plant site on a five-year rolling retention basis and be made available at the request of personnel of the TCEQ or any air pollution control agency with jurisdiction. **(08/21)**

A. The following data shall be recorded for each turbine test: model of turbine tested, the type of fuel fired, the duration of the test, whether water injection was used, and whether low NOx burner technology was used. **(02/25)**

B. The data required in Special Condition No. 11.A shall be recorded daily, and a summary shall be produced monthly that represents emissions from each test cell in lb/hr on a daily basis and tons emitted for the previous 12-month period. The data shall be reduced using the calculation methods specified in Special Condition No. 11.

C. The daily, monthly, and annual records required in Special Condition No. 13.A and 13.B shall be kept in a central location with examples of the method of data reduction including units, conversion factors, assumptions, and the basis of the assumptions.

D. To demonstrate compliance with Special Condition No. 4, the permit holder must keep records of fuel analyses, as obtained from the supplier on an annual basis for natural gas and on a shipment basis for liquid fuel, or must maintain a contract with the fuel supplier that guarantees compliance. **(06/02)**

E. The holder of this permit shall document the check for visible emissions in order to show compliance with Special Condition No. 3. **(01/07)**

F. Records of hours of operation of each flare as required in Special Condition No. 10, and records of annual mass emission rates as may be required in Special Condition No. 10. Sufficient operating data shall be collected to calculate hourly and annual emissions if requested by the TCEQ. **(02/25)**

G. Records of loss of pilot flame as required in Special Condition 12.C. **(02/25)**

H. Records of annual emissions from Test Cell 7 (EPN TC7) shall be maintained which demonstrate compliance with the annualized MAERT and Nonattainment New Source Review (NNSR) - Emission Reductions limitations in this permit. These records of emissions shall be calculated utilizing the methodology found in Special Condition No. 11. **(08/21)**

I. The holder of this permit shall document hazardous air pollutant emissions resulting from the operation of all sources at the site to demonstrate compliance with Special Condition No. 20. **(09/04)**

Nonattainment New Source Review (NNSR) - Emission Reductions

14. This Nonattainment New Source Review (NNSR) permit is issued/approved based on the requirement that the permit holder offset the project emission increase for facilities authorized by this permit prior to the commencement of operation, through participation in the TCEQ Emission Banking and Trading (EBT) Program in accordance with the rules in 30 TAC Chapter 101, Subchapter H. **(08/21)**

15. This NNSR permit is issued/approved based on the use of 47.8 tpy of NO_x emission credits from TCEQ Emission Reduction Credit Certificate (ERCC) No. 2803. This ERCC provides offsets at the ratio of 1.2 to 1 for 39.8 tpy of NO_x from EPN: TC6. The NO_x emission rate is for calculation purposes only and is not an enforceable allowable emission rate. **(02/15)**

16. This NNSR permit is issued/approved based on the future requirement to obtain and provide NO_x emission reduction credits to offset the emission increase for EPN: TC7, TC6F, TC7F, and HFF1 authorized by this permit. **(02/25)**

A. The total credits required to offset the NOx emission increase for EPN: TC7, TC6F, TC7F, and HFF1 is 123.4 tpy.

B. The permit holder shall use 40.3 tpy of NO_x ERCs from TCEQ credit certificate numbers 4013, 4014, 4015, 4016, 4017, 4018, 4112, 4113, and 4114 to offset NO_x project increase for EPN: TC7 at a ratio of 1.2 to 1.0 through the year 2024.

C. Beginning in calendar year 2025, the permit holder shall surrender additional emission credits, based on the schedule below, to offset the emission increase for EPN TC7 at a ratio of 1.3 to 1.0.

Table 1: Offset Requirements for Calendar Years 2025+

Calendar Year or Later	Emissions Increase (tpy)	Amount of Additional Credits to be Provided (tpy)
2025	48.40	20.2
2026	48.40	0.0
2027	73.55	32.7
2028	82.24	11.3
≥2029	96.78	18.9

17. The permit holder shall obtain approval from the TCEQ EBT Program for the credits being used and then submit a permit alteration request to the TCEQ Air Permits Division (and copy the TCEQ Regional Office) to identify approved credits by TCEQ credit certificate number. The following options are available: **(08/21)**

A. Obtain and use NOx Emission Reduction Credits (ERCs). A completed ERC use application shall be submitted to the TCEQ EBT Program at least 90 days before the start of increased operations for Test Cell No. 7 according to the permit amendment application, PI-1 dated June 26, 2024. The permit holder shall obtain approval from the TCEQ EBT Program for the credits being used and then submit a permit alteration or amendment request to the TCEQ Air Permits Division (and copy the TCEQ Regional Office) to identify approved credits by TCEQ credit certificate number. **(02/25)**

B. Obtain and use NOx Discrete Emission Reduction Credits (DERCs) for each year of authorized operation. The permit holder shall submit a completed DERC intent to use application form by August 1st prior to the continuing of operations each year (unless late submittal criteria are satisfied), and the intent to use must be reviewed and approved by the TCEQ EBT Program for compliance with 30 Texas Administrative Code §101.376(f). Additionally, the permit holder shall submit a permit alteration or amendment request to the TCEQ Air Permits Division (and copy the TCEQ Regional Office) to identify the DERCs by TCEQ DERC certificate number to cover, at a minimum, one year of operation of the permitted facilities. **(02/25)**

(1) In accordance with 30 Texas Administrative Code §101.372(i) in areas having an ozone season of less than 12 months (as defined in 40 Code of Federal Regulations Part 58, Appendix D), NOx discrete emission credits generated outside the ozone season may not be used during the ozone season.

C. A combination of ERCs and DERCs can be used provided that the total credits satisfy the amounts specified in Special Condition No. 16 and that the appropriate EBT Program usage applications and the appropriate Air Permits Division alteration or amendment applications are submitted. **(08/21)**

Additional Permit Requirements

18. A copy of this permit shall be kept at the plant site and made available at the request of personnel from the TCEQ or the local air pollution control agency with appropriate jurisdiction.

19. The holder of this permit shall physically identify and mark in a conspicuous location all equipment that has the potential of emitting air contaminants as follows:

    A. The facility identification numbers as submitted to the Emissions Inventory Section of the TCEQ.

    B. The EPNs as listed on the maximum allowable emission rates table.

20. The holder of this permit shall operate the facilities at this site such that for hazardous air pollutants (HAPs), which have been listed pursuant to § 112(b) of the Federal Clean Air Act:

    A. Emissions of any single HAP shall not exceed 10 tons per year (tpy).

    B. Emissions of all HAPs combined shall not exceed 25 tpy. **(09/04)**

Referenced Authorizations

21. The following sources and/or activities are authorized under a Permit by Rule (PBR) by Title 30 Texas Administrative Code Chapter 106 (30 TAC Chapter 106). These lists are not intended to be all inclusive and can be altered without modifications to this permit. **(02/25)**

Authorization	Source or Activity
PBR 30 TAC 106.472	Diesel Fuel Tank No. 2 (EPN: DFT2)
PBR No. 16458	Paint Spray Booth (EPN: PSB1)

Date: February 25, 2025

Emission Sources - Maximum Allowable Emission Rates

Permit Number 20041, N196M2, and PSDTX1590M1

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hour	TPY (4)
TC1	Test Cell 1 Gas fuel firing	NO_x	106.9	-
		CO	84.8	-
		VOC	46.6	-
		PM	5.3	-
		PM_{10}	5.3	-
		$PM_{2.5}$	5.3	-
		SO_2	2.0	-
TC1	Test Cell 1 Liquid fuel firing	NO_x	181.5	-
		CO	88.8	-
		VOC	20.4	-
		PM	15.7	-
		PM_{10}	15.7	-
		$PM_{2.5}$	15.7	-
		SO_2	7.5	-
TC1	Test Cell 1 - Annual Emission Rate Gas and Liquid Fuel Firing	NO_x	-	100.2
		CO	-	27.7
		VOC	-	9.4
		PM	-	10.7
		PM_{10}	-	10.7
		$PM_{2.5}$	-	10.7
		SO_2	-	2.9

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hour	TPY (4)
TC2	Test Cell 2 Gas Fuel Firing	NO_x	8.7	-
		CO	18.4	-
		VOC	4.7	-
		PM	0.7	-
		PM_{10}	0.7	-
		$PM_{2.5}$	0.7	-
		SO_2	0.4	-
TC2	Test Cell 2 Liquid Fuel Firing	NO_x	13.0	-
		CO	37.0	-
		VOC	4.7	-
		PM	3.5	-
		PM_{10}	3.5	-
		$PM_{2.5}$	3.5	-
		SO_2	1.5	-
TC2	Test Cell 2 – Annual Emission Rates Gas and Liquid Fuel Firing	NO_x	-	8.7
		CO	-	9.2
		VOC	-	0.9
		PM	-	1.9
		PM_{10}	-	1.9
		$PM_{2.5}$	-	1.9
		SO_2	-	0.8

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hour	TPY (4)
TC3	Test Cell 3 Gas Fuel Firing	NO_x	80.0	-
		CO	84.8	-
		VOC	13.5	-
		PM	2.5	-
		PM_{10}	2.5	-
		$PM_{2.5}$	2.5	-
		SO_2	1.1	-
TC3	Test Cell 3 Liquid Fuel Firing	NO_x	120.0	-
		CO	45.6	-
		VOC	7.2	-
		PM	15.7	-
		PM_{10}	15.7	-
		$PM_{2.5}$	15.7	-
		SO_2	4.8	-
TC3	Test Cell 3 – Annual Emission Rates Gas and Liquid Fuel Firing	NO_x	-	35.9
		CO	-	19.4
		VOC	-	1.8
		PM	-	10.7
		PM_{10}	-	10.7
		$PM_{2.5}$	-	10.7
		SO_2	-	2.7

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hour	TPY (4)
TC4	Test Cell 4 Gas Fuel Firing	NO_x	106.9	-
		CO	84.8	-
		VOC	46.6	-
		PM	5.3	-
		PM_{10}	5.3	-
		$PM_{2.5}$	5.3	-
		SO_2	2.0	-
TC4	Test Cell 4 Liquid Fuel Firing	NO_x	181.5	-
		CO	41.3	-
		VOC	14.3	-
		PM	15.7	-
		PM_{10}	15.7	-
		$PM_{2.5}$	15.7	-
		SO_2	7.5	-
TC4	Test Cell 4 Gas and Liquid Fuel Firing	NO_x	-	100.2
		CO	-	27.7
		VOC	-	9.4
		PM	-	10.7
		PM_{10}	-	10.7
		$PM_{2.5}$	-	10.7
		SO_2	-	2.9

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hour	TPY (4)
TC5	Test Cell 5 Gas Fuel Firing	NO_x	192.8	-
		CO	30.0	-
		VOC	8.8	-
		PM	8.5	-
		PM_{10}	8.5	-
		$PM_{2.5}$	8.5	-
		SO_2	3.8	-
TC5	Test Cell 5 Liquid Fuel Firing	NO_x	338.8	-
		CO	30.0	-
		VOC	8.8	-
		PM	12.1	-
		PM_{10}	12.1	-
		$PM_{2.5}$	12.1	-
		SO_2	14.1	-
TC5	Test Cell 5 – Annual Emission Rates Gas and Liquid Fuel Firing	NO_x	-	74.53
		CO	-	25.48
		VOC	-	5.81
		PM	-	7.49
		PM_{10}	-	7.49
		$PM_{2.5}$	-	7.49
		SO_2	-	4.15

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hour	TPY (4)
TC6	Test Cell 6 Gas Fuel Firing	NO_x	949.83	-
		CO	1415.08	-
		VOC	16.17	-
		PM	4.21	-
		PM_{10}	4.21	-
		$PM_{2.5}$	4.21	-
		SO_2	3.04	-
TC6	Test Cell 6 Liquid Fuel Firing	NO_x	409.53	-
		CO	417.12	-
		VOC	31.78	-
		PM	13.60	-
		PM_{10}	13.60	-
		$PM_{2.5}$	13.60	-
		SO_2	0.35	-
TC6	Test Cell 6 – Annual Emission Rates Gas and Liquid Fuel Firing	NO_x	-	39.78
		CO	-	49.46
		VOC	-	4.03
		PM	-	9.88
		PM_{10}	-	9.88
		$PM_{2.5}$	-	9.88
		SO_2	-	5.24

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hour	TPY (4)
TC7	Test Cell 7 Gas Fuel Firing	NO_x	1978.02	-
		CO	1410.31	-
		VOC	107.07	-
		PM	3.66	-
		PM_{10}	3.66	-
		$PM_{2.5}$	3.66	-
		SO_2	4.92	-
TC7	Test Cell 7 Liquid Fuel Firing	NO_x	989.01	-
		CO	1645.36	-
		VOC	535.35	-
		PM	8.22	-
		PM_{10}	8.22	-
		$PM_{2.5}$	8.22	-
		SO_2	0.60	-
TC7	Test Cell 7 – Annual Emission Rates Gas and Liquid Fuel Firing	NO_x	-	24.31
		CO	-	99.19
		VOC	-	10.37
		PM	-	2.15
		PM_{10}	-	2.15
		$PM_{2.5}$	-	2.15
		SO_2	-	2.09
TC7	Test Cell 7 – Annual Emission Rates Gas and Liquid Fuel Firing – 2025 and 2026 (5)	NO_x	-	48.31
		CO	-	99.19
		VOC	-	10.37

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hour	TPY (4)
		PM	-	2.15
		PM_{10}	-	2.15
		$PM_{2.5}$	-	2.15
		SO_2	-	2.09

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hour	TPY (4)
TC7	Test Cell 7 – Annual Emission Rates Gas and Liquid Fuel Firing – 2027 (6)	NO_x	-	73.46
		CO	-	99.19
		VOC	-	10.37
		PM	-	2.15
		PM_{10}	-	2.15
		$PM_{2.5}$	-	2.15
		SO_2	-	2.09
TC7	Test Cell 7 – Annual Emission Rates Gas and Liquid Fuel Firing – 2028 (7)	NO_x	-	82.15
		CO	-	99.19
		VOC	-	10.37
		PM	-	2.15
		PM_{10}	-	2.15
		$PM_{2.5}$	-	2.15
		SO_2	-	2.09
TC7	Test Cell 7 – Annual Emission Rates (8) Gas and Liquid Fuel Firing – 2029 and thereafter	NO_x	-	96.69
		CO	-	99.19
		VOC	-	10.37
		PM	-	2.15
		PM_{10}	-	2.15
		$PM_{2.5}$	-	2.15
		SO_2	-	2.09
TC6F	Test Cell No. 6 Flare	NO_x	0.90	0.01
		CO	4.10	0.05
		VOC	0.12	<0.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hour	TPY (4)
		SO_2	0.19	<0.01
TC7F	Test Cell No. 7 Flare	NO_x	0.90	0.01
		CO	4.10	0.05
		VOC	0.12	<0.01
		SO_2	0.19	<0.01
HFF1	Hydrogen Farm Flare	NO_x	6.15	0.07
		CO	28.02	0.34
		VOC	0.80	0.01
		SO_2	1.30	0.02
F1	TC1, TC3-5 Process Fugitives (9)	VOC	0.6	0.3
F2	TC2 Process Fugitives (9)	VOC	0.3	0.1
F3	TC6 Process Fugitives (9)	VOC	0.01	0.01
S1	Oil/Water Separator	VOC	0.1	0.3
S2	TC6 Oil/Water Separator	VOC	0.01	0.05
S3	TC7 Oil/Water Separator	VOC	0.01	0.05
CT1	Cooling Tower	VOC	0.08	0.37
		PM	0.60	2.63
		PM_{10}	0.15	0.66
		$PM_{2.5}$	0.01	0.03
		Cl_2	<0.01	<0.01
CT3	Cooling Tower	VOC	0.1	0.4
		PM	0.60	2.63
		PM_{10}	0.15	0.66
		$PM_{2.5}$	0.01	0.03

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hour	TPY (4)
		Cl_2	<0.01	<0.01
CT4	TC6 Cooling Tower	VOC	0.08	0.37
		PM	0.06	0.26
		PM_{10}	0.02	0.09
		$PM_{2.5}$	<0.01	<0.01
		Cl_2	<0.01	<0.01
CT5	TC7 Cooling Tower No. 5	VOC	0.08	0.37
		PM	0.06	0.26
		PM_{10}	0.02	0.07
		$PM_{2.5}$	<0.01	<0.01
		Cl_2	<0.01	<0.01

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.
(3) NO_x - total oxides of nitrogen
CO - carbon monoxide
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$
PM_{10} - total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
SO_2 - sulfur dioxide
Cl_2 - chlorine
(4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
(5) Emission rates for EPN: TC7 are effective for calendar years 2025-2026, and/or for the subsequent calendar year following approval from TCEQ EBT for the NOx emission credits.
(6) Emission rates for EPN: TC7 are effective for calendar year 2027, and/or for the subsequent calendar year following approval from TCEQ EBT for the NOx emission credits.
(7) Emission rates for EPN: TC7 are effective for calendar year 2028, and/or for the subsequent calendar year following approval from TCEQ EBT for the NOx emission credits.
(8) Emission rates for EPN: TC7 are effective for calendar year 2029 and thereafter, following approval from TCEQ EBT for the NOx emission credits.
(9) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

Date: February 25, 2025